

What is claimed is:

1. A method for promoting bone growth between at least two adjacent bone masses with an implant surgically implanted in the area to be joined, said method comprising the steps of:

providing the implant having opposed first and second surfaces for placement between and in contact with the adjacent bone masses, a mid-longitudinal axis, and a hollow chamber between the first and second surfaces, the hollow chamber being adapted to hold bone growth promoting material, the hollow chamber being along at least a portion of the mid-longitudinal axis of the implant, each of the first and second surfaces having at least one opening in communication with the hollow chamber into which bone from the adjacent bone masses grows;

placing the implant between the adjacent bone masses and in contact with the adjacent bone masses to be joined by bone growth; and

energizing the implant with an energizer to promote bone growth from adjacent bone mass to adjacent bone mass through the first and second surfaces and through at least a portion of the hollow chamber at the mid-longitudinal axis of the implant.

2. The method of claim 1, wherein the energizing step includes using an energizer that is at least in part within the hollow chamber of the implant.

3. The method of claim 1, wherein the energizing step includes using an energizer that is at least in part between the first and second surfaces of the implant that are placed between and in contact with the adjacent bone masses.

4. The method of claim 1, wherein the energizing step includes energizing the implant from a point external to a patient's body.

5. The method of claim 1, wherein the energizing step includes providing negative charge to a first portion of the implant.
6. The method of claim 1, further comprising the step of providing positive charge to a second portion of the implant to inhibit bone growth in an area adjacent to the second portion.
7. The method of claim 1, wherein the energizing step includes generating an electromagnetic wave.
8. The method of claim 1, wherein the energizing step includes generating electromagnetic energy.
9. The method of claim 1, wherein the energizing step includes generating a magnetic field.
10. The method of claim 1, wherein the energizing step includes delivering intermittent pulses of current.
11. The method of claim 1, wherein the energizing step includes delivering one of an alternating current, a direct current, and a sinusoidal current.
12. The method of claim 1, wherein the energizing step comprises utilizing the energizer that includes one of an electromagnetic wave generator, an electromagnetic energy generator, and a magnetic field generator.
13. The method of claim 1, wherein the energizing step comprises utilizing the energizer that is an electromagnetic field generator positioned external to a patient's body and is inductively coupled to the implant.
14. The method of claim 1, wherein the energizing step includes energizing the implant with an electromagnetic field so that the implant emits an electromagnetic field.

15. The method of claim 1, further comprising the step of accessing the hollow chamber through an access opening in the implant.
16. The method of claim 15, further comprising the step of utilizing a cap for closing the access opening of the hollow chamber.
17. The method of claim 16, wherein the energizer attaches to the cap.
18. The method of claim 1, wherein the providing step includes providing the implant with a coil wrapped around at least a portion of the implant, the coil being electrically conductive.
19. The method of claim 18, wherein at least a portion of the coil is in the form of an external thread on at least a portion of the first and second surfaces of the implant.
20. The method of claim 19, wherein the external thread is energized by the energizer.
21. The method of claim 19, wherein the external thread conducts electromagnetic energy to the interior space of the implant.
22. The method of claim 1, wherein the providing step includes providing the implant having a passage between at least two of the openings through the implant such that the passage communicates with each of the adjacent bone masses to be joined, and having a conductive coil disposed about the passage and coupled to the energizer.
23. The method of claim 1, wherein the providing step includes providing the implant with the first and second surfaces of the implant being at least in part arcuate.
24. The method of claim 23, wherein the providing step includes providing the implant that is generally cylindrical.
25. The method of claim 1, wherein the providing step includes providing the implant

with the first and second surfaces of the implant being at least in part planar.

26. The method of claim 1, wherein the placing step includes inserting the implant to fit entirely between the adjacent bone masses.

27. The method of claim 1, wherein the providing step includes providing the implant comprising a material other than bone.

28. The method of claim 1, wherein the providing step includes providing the implant comprising bone.

29. The method of claim 28, wherein the bone includes cortical bone.

30. The method of claim 1, wherein the providing step includes providing the implant comprising bone growth promoting material.

31. The method of claim 30, wherein the bone growth promoting material is at least in part bone.

32. The method of claim 30, wherein the bone growth promoting material is a material other than bone.

33. The method of claim 30, wherein the bone growth promoting material includes at least one of bone morphogenetic protein and hydroxyapatite.

34. The method of claim 1, further comprising the step of coating the implant with a bone growth promoting substance.

35. The method of claim 1, wherein the implant is combined with bone growth promoting material.

36. The combination of claim 35, wherein the bone growth promoting material is at least in part bone.

37. The combination of claim 35, wherein the bone growth promoting material is a

material other than bone.

38. The combination of claim 35, wherein the bone growth promoting material includes at least one of bone morphogenetic protein and hydroxyapatite.
39. The method of claim 1, wherein the providing step includes providing the implant comprising a material that is a source of osteogenesis.
40. The method of claim 1, wherein the implant is combined with a material that intrinsically participates in the growth of bone from one of the adjacent bone masses to the other of the adjacent bone masses.
41. The method of claim 1, wherein the implant is an interbody spinal fusion implant.
42. The method of claim 1, wherein the implant is for fusion of a joint in the body.
43. The method of claim 1, wherein the adjacent bone masses are vertebral bodies.
44. The method of claim 1, wherein the adjacent bone masses are broken portions of the same bone.